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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/801,001

03/16/2004

Hidenori Kajita

461-167

1589

25117

7590

03/20/2007

NIXON & VANDERHYE, PC

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ARLINGTON, VA 22203

EXAMINER

VIDAYATHIL, TRESA V

ART UNIT

PAPER NUMBER

3746

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/20/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No.		Applicant(s)	
	10/801,001		KAJITA, HIDENORI	
	Examiner		Art Unit	
	Tresa V. Vidayathil		3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/16/04, 8/5/04, 7/18/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed August 5, 2004 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

German patent 676147 was not considered because a copy of this foreign patent document was not submitted to the U.S. Patent and Trademark Office.

Drawings

2. Figures 4 and 5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to because reference numeral 26 is pointing to the pump cover instead of the pump plate in Fig. 2.

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4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the screws fastening the pump cover to the housing in cl. 3 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

For sections 3 and 4 above, corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Pump Plate of a Rotary Feed Pump.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1 and 3 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. The term "substantially" in claims 1 and 2 is a relative term which renders the claim indefinite. The terms "substantially arc-shaped" in cl 1, l. 12 and "substantially at a center" in cl. 2, l. 3 are not defined by the claims, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. For purposes of examination, "substantially arc-shaped" will be interpreted as "arc-shaped," and "substantially at a center" will be interpreted as "at the center."

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 1-3 rejected under 35 U.S.C. 103(a) as being unpatentable over

Brundage 3,695,791 in view of Miller 2,764,941.

Brundage discloses: trochoid-type pump element (Fig. 4) rotated by a driving shaft 22, pump plate (Fig. 3) disposed on one end side of the pump element (Fig. 4) in an axial direction (Fig. 1 – references to sectional views 3-3 and 4-4), pump plate (Fig. 3) having a shaft hole (Fig. 3 – see center) through at its center which the driving shaft 22 is inserted, pump plate (Fig. 3) having arc-shaped fuel inlet 46 and outlet 48 ports around the shaft hole (Fig. 3 and col. 5, ll. 4-16), pump cover (18 and 16) which covers the other end side of the pump element (Fig. 3) in the axial direction thereof and an outer periphery of the pump element (Fig. 3) in the radial direction thereof (Fig. 1), pump cover (18 and 16) being combined with the pump plate (Fig. 3) in a liquid-tight manner (col. 5, ll. 18-30), pump cover (18 and 16) being fastened to the housing side surface 14 together with the pump plate (Fig. 3) (Fig. 1 – see bolts 19), pump cover (18 and 16) is fastened to the housing side surface by screws 19.

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Regarding the limitation that pump cover which covers the other end side of the pump element in the axial direction thereof and an outer periphery of the pump element in the radial direction thereof, integrating elements of an apparatus fails to patentably distinguish this invention over the prior art (MPEP § 2144.04.V.B). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to design the pump cover in multiple pieces with the means to attach those pieces together (Fig. 1).

Regarding the limitation that the pump cover and pump plate are fastened to the housing side surface by screws, regardless of whether the claimed fasteners are screws or bolts, they perform the same function in both the applicant's invention and Brundage. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Brundage with bolts to fasten the pump cover and pump plate to the housing in order to maintain these parts connected to the housing (col. 5, ll. 28-30).

However, Brundage does not teach the following limitations that are taught by Miller: pump plate 82 has a rib (Fig. 7 – see portion of pump plate between the inlet ports 84 or the outlet ports 89) that partitions at least one of the inlet 84 and outlet 89 ports in a circumferential direction and couples the opposite sides of the port (Fig. 7), rib (Fig. 7 – see portion of pump plate between the inlet ports 84 or the outlet ports 89) is provided substantially at a center of said at least one of the ports (84 or 89) in the circumferential direction.

Note that the apparatus claimed in Miller uses multiple vane pumps. However, Brundage states that the invention in Brundage using a gear or gerotor type pump may be employed with vane type pumps (Brundage, col. 1, ii. 9-14).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Brundage with a vane pump and provide multiple inlet and outlet ports as part of the design of the pump in order to provide a large volume of fluid at a relatively low pressure (Miller, col. 3, ll. 43-47).

Conclusion


12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Stoyke 2,780,170 is cited on Form PTO-892 because it also shows a pump cover and pump plate fastened by screws to the housing side surface.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tresa V. Vidayathil whose telephone number is (571) 272-3436. The examiner can normally be reached on 9AM - 5:30PM, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Stashick can be reached on (571) 272-4561. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Anthony Stashick
Supervisory Primary Examiner
Art Unit 3746


Tresa V. Vidayathil

3/17/07